Genus THEOBALDIA Neveu-Lemaire.

Theobaldia Neveu-Lemaire, 1902, *C.R. Soc. Biol.*, 54: 1331. Type, *annulata* Schr. *Culicella* Felt, 1904, *N.Y. State Mus. Bull.*, 79: 391*c*. Type, *dyari* Coq. *Culiseta* Felt, 1904, *N.Y. State Mus. Bull.*, 79: 391*c*. Type, *absorbrina* Felt. *Theobaldinella* Blanchard, 1905, Les Mostiques, p. 390. Type, *annulata* Schr. *Pseudotheobaldia* Theobald, 1907, *Monog. Cul.*, 4: 271. Type, *niveitaeniata* Theo. *Climacura* Howard, Dyar and Knab, 1915, Mosq. N.C. Am., 3: 452. Type, *melanura* Coq. *Allotheobaldia* Brolemann, 1919, *Ann. Soc. Ent. France*, 88: 90. Type, *longiareolata* Meg. *Theomyia* Edwards, 1930, *Bull. Ent. Res.*, 21: 303. Type, *fraseri* Edw.

Characters of the Genus.

(Adapted to Victorian species.)

Adult. The head has narrow, curved, upright, forked scales on the vertex and flat scales laterally. The eyes are almost touching. The proboscis is moderately long. The palpi of the male are about as long as the proboscis and more or less hairy. The palpi of the female are always short, with a vestige of a fourth segment.

The thorax has strong acrostichal and dorsocentral bristles; the scales are always narrow and curved. The scutellum has narrow scales and long border bristles. The anterior pronotal lobes have a few strong bristles and several shorter ones, and in some species a few narrow curved scales. The posterior pronotal lobes have bristles and, in most species, narrow curved scales.

The spiracular bristles are fine and few in number; post-spiracular scales are usually absent (a few minute ones are present in *T. littleri*).

The sternopleura has on the lower part a few strong bristles, several shorter ones and scales. The pre-alar has a patch of bristles. The upper posterior part of the mesepimeron has a patch of erect hairs and, below this, a patch of flat scales or fine hairs; there are two or three strong lower mesepimeral bristles, a few short ones, and scales.

The legs are dark, with pale reflections apically in some species. The claws on the anterior legs of the males are toothed; in the females all are simple. Pulvilli are absent.

The wings are unspotted. The venation is very uniform; the subcosta extends beyond the end of the radius; the fork cell of the second longitudinal vein is longer than its stem; the cross-veins are well separated. The outstanding scales of the wings are narrow; on the base of the radius there are, on the upper surface, a few long hairs, and on the lower surface a group of hairs and scales in front. The squama has a long dense fringe, and the alula long narrow scales.

The abdomen is always unbanded, blunt tipped, and with a non-retractile eighth segment. Hypopygium of male: the coxite is rather long; its basal lobe varies in size and in the extent to which it is separated from the coxite; the tip of the lobe bears a number of hairs and spines. The style is simple, long and slender, with a terminal spine. The paraprocts have a few terminal teeth.

Pupa. This is similar to that of *Aëdes*; the trumpet is always short, with a large oblique opening. The distal margin of the paddle is smooth or very finely spiculate.

Larva. The siphon is rather long. All species, except *T. littleri*, have the tuft, which may consist of a single hair, at the base of the siphon. The comb consists of a large patch of small teeth.

Subgeneric Division.

The various subgenera of *Theobaldia*, although clearly defined in the larval stage, are often difficult or impossible to recognize in adult specimens. Thus Edwards (1923) suggested that the two Australian species then known belonged to the subgenus *Culicella*, but pointed out that this placing was tentative pending an examination of larval stages. Subsequently (1932) and still without access to larval material, he placed all the species in the subgenus *Climacura*.

With the discovery of the larval stages the Victorian species can be definitely assigned to their subgenera. As Lee (1937) showed, *T. inconspicua* belongs to the

subgenus *Culicella*; this is also the case with *T. victoriensis*. *T. hilli* and *T. frenchi*, on the one hand, and *T. littleri* on the other, require new subgenera.*

Edwards (1932) defined the subgenus *Culicella*, on larval characters, as follows: "Head large and broad. Antennae long and stout, with a large tuft well beyond middle; two of the apical bristles very long and somewhat removed from the tip. Mouth brushes very large. No air sacs in thorax. Siphon long and tapering, with one pair of basal tufts; pecten consisting of spine-like teeth only, no fine hairs distally. Comb-teeth in a large patch. Anal segment ringed by the plate (in fourth stage); several tufts piercing the plate ventrally before the brush. Outer dorsal hair of anal segment branched. Gills rather long, pointed."

The larva of *T. victoriensis* agrees with this description, but two of the apical antennal bristles are not removed from the tip; the outer dorsal hair of the anal segment is unbranched. Not more than one tuft pierces the anal plate before the brush.

Neotheobaldia, n. subg.—Larva (Fig. 6): The head is not very large. The antennae are of moderate length; the tuft is well beyond the middle; none of the apical bristles are removed from the tip. The siphon is of moderate length, with one pair of basal tufts; the pecten teeth are in the form of hairs. The anal segment is ringed by the plate; no tufts pierce the plate before the brush. The outer dorsal hair of the anal segment is unbranched. The anal papillae are not large.

This subgenus is erected for *T. hilli* and *T. frenchi*. It is close to *Theobaldia*, s. str., but is distinguished by the absence of a row of hairs following the pecten and by the form of the pecten teeth.

Austrotheobaldia, n. subg.—Larva (Fig. 9): All the hairs are simple. The head is very large and broad. The antennae are long; two of the apical bristles are removed from the tip. The siphon is long and tapering; the siphonal tuft consists of a two-branched hair, or a single one, about half-way along the siphon. The pecten consists of triangular teeth. The comb has a long row of small scales and two or three irregular short rows of long scales. The outer dorsal hair of the anal segment is branched. The anal papillae, which are not large, are pointed.

This subgenus is erected for *T. littleri*. It differs from all other subgenera of *Theobaldia* in that all the hairs are simple and the siphonal tuft is half-way along the siphon.

The Victorian members of the genus *Theobaldia* can be distinguished from other genera by the unbanded, blunt-ended abdomen, the absence of pulvilli and the presence of spiracular hairs. Within the genus the males of the various species are easily distinguished, particularly by their hypopygial characters, but the females of *T. hilli* and *T. frenchi* are hardly distinguishable from one another and in fact cannot always be separated with certainty. The larvae of these two species are also very similar.

Key to Victorian Species of Theobaldia.

Adult Males.

1. Proboscis pale beneath; last two segments of palpi, in living specimens, bent backwards ..... *inconspicua.*
   Proboscis black beneath 2
2. Last segments of tarsi with pale reflections 4
   Tarsi entirely dark 3
3. Upright scales on vertex pale, basal lobe of coxite long and well separated from the base ..... *littleri.*
   Upright scales on vertex dark; basal lobe separated only towards the tip ..... *frenchi atritarsalis.*
4. Base of tarsal segments with pale scales. Coxite with black scales and golden bristles dorsally, and dense goldish hairs ventrally ..... *victoriensis.*
   Proximal segments of tarsi dark scaled, distal segments pale 5

* A new Victorian species of *Theobaldia* has recently been found by Mr. G. Douglas. On the structure of the larva, it belongs to the subgenus *Climacura*, which hitherto has been known only from North America.